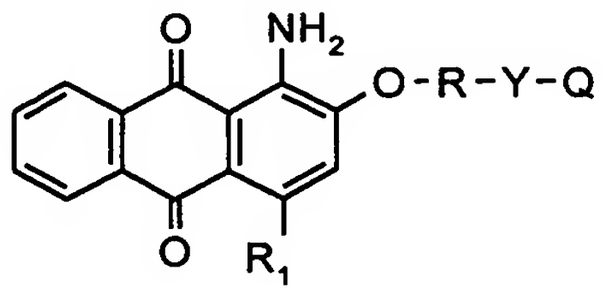
We claim:

1. An anthraquinone colorant having the structure in Formula I:



I

wherein:

R is a divalent linking group selected from the group consisting of -C_2-C_8-alkylene-, -(C_2-C_4-alkylene-Z)$_n$-C_2-C_4-alkylene-, -C_2-C_6-alkylene-O-arylene-O-C_2-C_6-alkylene-, -arylene-O-C_1-C_6-alkylene-, -CH_2-1,4-cyclohexylene-CH_2- and -arylene-C_1-C_6-alkylene-;

Z is -O-, -S-, -N(SO_2R_4)-, -N(R_3)CO- or -N(COR_5)-;

R_1 is hydroxy, -$NHSO_2R_2$ or $NHCOR_2$;

R_2 is C_1-C_6-alkyl, C_3-C_8-cycloalkyl or aryl;

Y is -O- or -N(R_3)-;

R_3 is hydrogen, C_1-C_6-alkyl, C_3-C_8-cycloalkyl or aryl;

R_4 is C_1-C_6-alkyl, C_3-C_8-cycloalkyl or aryl;

R_5 is C_1-C_6-alkyl, C_1-C_6-alkoxy, C_3-C_8-cycloalkyl or aryl;

n is an integer from 1 to 3; and

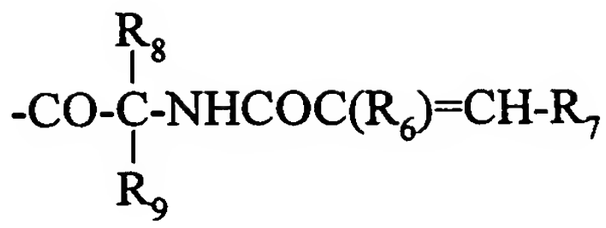
Q is an ethylenically unsaturated, photopolymerizable or free radical initiated polymerizable group.

2. A colorant according to claim 1 wherein Q is

1 -COC(R_6)=CH-R_7

2 -CONH-COC(R_6)=CH-R_7

3 -CONH-C_1-C_6-alkylene-OCOC(R_6)-CH=CH-R_7

4 

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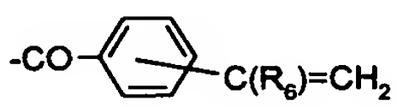
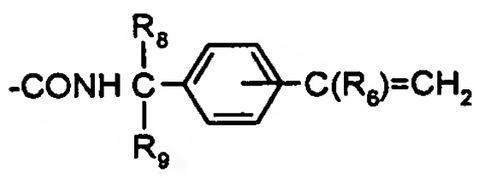
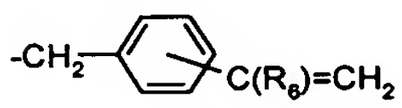
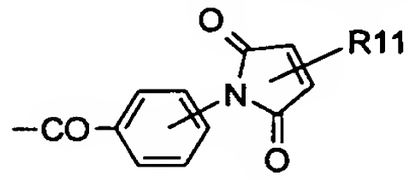
6 

7 

8 

9 

or

10 

wherein:

R_6 is hydrogen or C_1-C_6-alkyl;

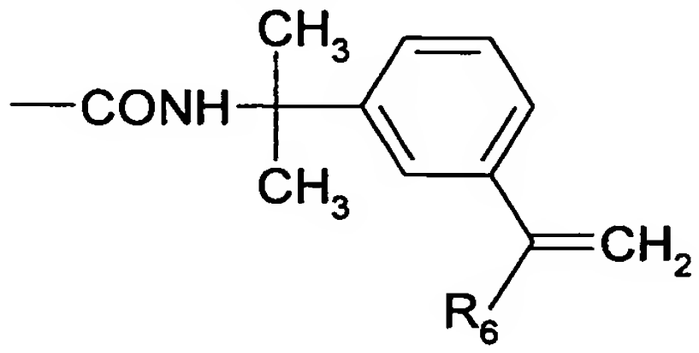
R_7 is hydrogen; C_1-C_6-alkyl; phenyl; phenyl substituted with one or more groups selected from the group consisting of C_1-C_6-alkyl, C_1-C_6-alkoxy, -N(C_1-C_6-alkyl), nitro, cyano, C_1-C_6-alkoxycarbonyl, C_1-C_6-alkanoyloxy and halogen; 1- or 2-naphthyl; 1- or 2-naphthyl substituted with C_1-C_6-alkyl or C_1-C_6-alkoxy; 2- or 3-thienyl; 2- or 3- thienyl substituted with C_1-C_6-alkyl or halogen; 2- or 3-furyl; or 2- or 3-furyl substituted with C_1-C_6-alkyl;

R_8 and R_9 are, independently, hydrogen, C_1-C_6-alkyl, or aryl; or R_8 and R_9 may be combined to represent a –[-CH_2-]$_{3-5}$- radical;

R_{10} is hydrogen, C_1-C_6-alkyl, C_3-C_8-alkenyl, C_3-C_8-cycloalkyl or aryl; and

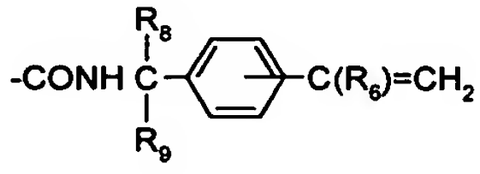
R_{11} is hydrogen, C_1-C_6-alkyl or aryl.

3. A colorant according to claim 1 wherein Q is $-COC(R_6)=CH_2$ or



and wherein R_6 is hydrogen or methyl.

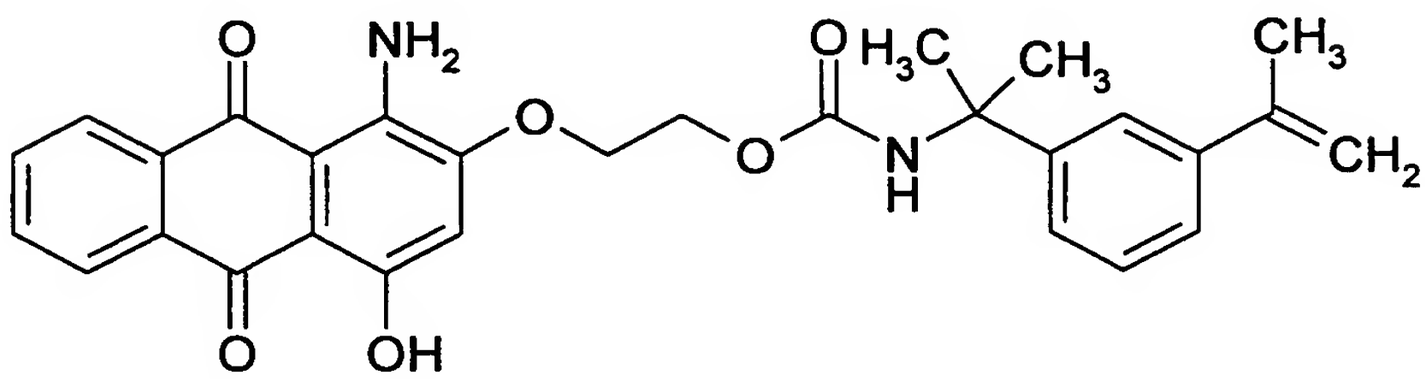
4. A colorant according to claim 1 wherein R is $-C_2$-C_6-alkylene-, $-C_2$-C_4-alkylene-O-arylene-O-C_2-C_4-alkylene-, $-(C_2H_4O)_n-C_2H_4-$ or $-CH_2$-1,4-cyclohexylene-CH_2-; n is an integer selected from 1 to 3; R_1 is hydroxy or $-NHSO_2R_2$; Y is oxygen; and Q is



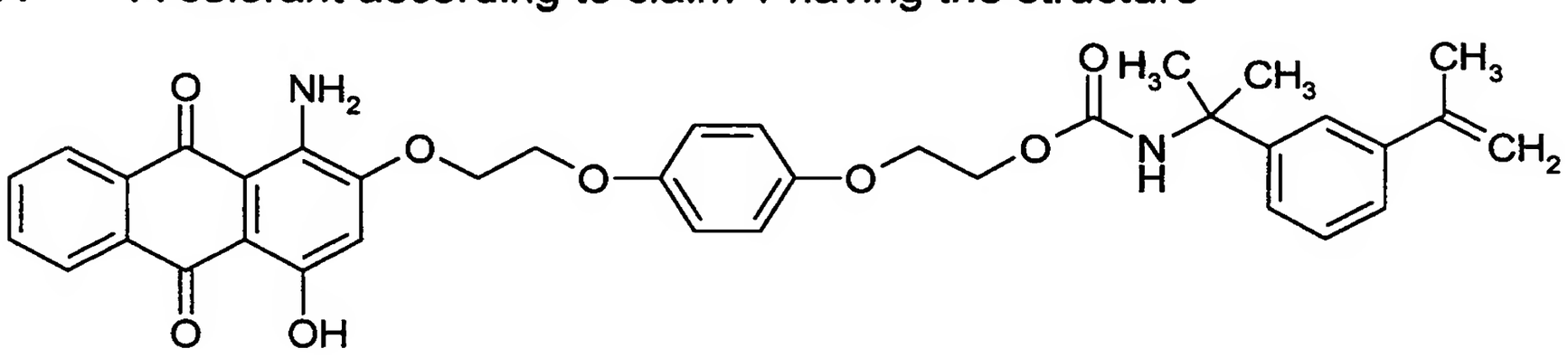
wherein R_6 is hydrogen or methyl and R_8 and R_9 are methyl.

5. A colorant according to claim 1 wherein R is $-C_2$-C_6-alkylene-, $-C_2$-C_4-alkylene-O-arylene-O-C_2-C_4-alkylene-, $-(C_2H_4O)_n-C_2H_4-$ or $-CH_2$-1,4-cyclohexylene-CH_2-; n is an integer from 1 to 3; R_1 is hydroxy or $-NHSO_2R_2$; Y is oxygen; and Q is $-COC(R_6)=CH-R_7$ wherein R_6 is hydrogen or methyl and R_7 is hydrogen.

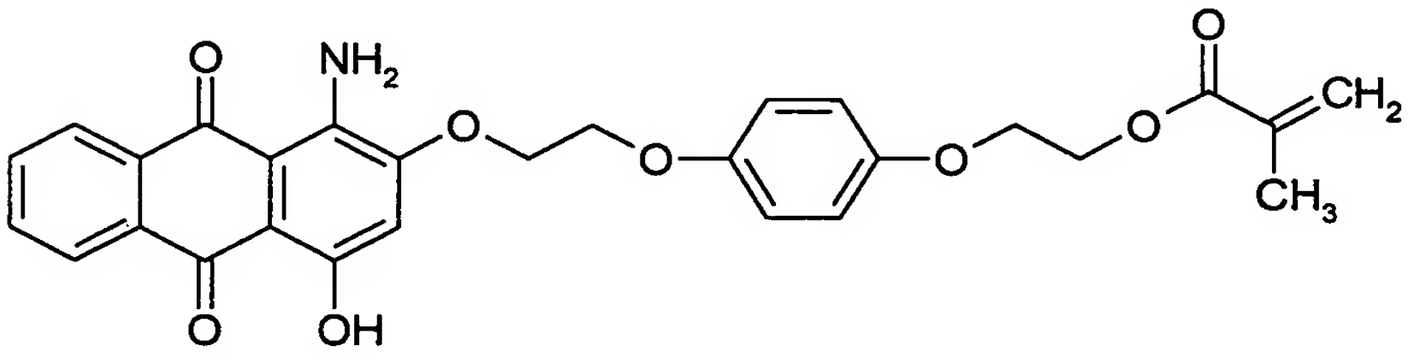
6. A colorant according to claim 1 having the structure



7. A colorant according to claim 1 having the structure



8. A colorant according to claim 1 having the structure



9. A coating composition comprising (i) one or more polymerizable vinyl compounds, (ii) one or more of the colorant compounds according to Claim 1, and (iii) at least one photoinitiator.

10. A coating composition according to Claim 9 comprising (i) one or more polymerizable vinyl compounds, (ii) one or more of the colorant compounds present in a concentration of about 0.5 to 25 wt % based on the weight of component (i), and (iii) a photoinitiator present in a concentration of about 1 to 15 wt% based on the weight of the polymerizable vinyl compound(s) present in the coating composition.

11. A coating composition according to claim 10 which further comprises one or more organic solvents.

12. A coating composition according to claim 10 wherein the composition is dispersed in water.

13. A composition according to claim 12 which further comprises a co-solvent.

14. A coating composition according to Claim 10 wherein the polymerizable vinyl compounds comprise a solution of a polymeric, polymerizable vinyl compound selected from acrylated or methacrylated polyesters, acrylated or methacrylated polyethers, acrylated or methacrylated epoxy polymers, acrylated or methacrylated urethanes, or mixtures thereof, in a diluent selected from monomeric acrylate or methacrylate esters.

15. A colorant concentrate comprising a solvent and a colorant according to Claim 1 at a concentration of about 0.5 to about 40 wt%.

16. A colorant concentrate according to claim 15 wherein the solvent is toluene, methylethyl ketone, acetone, hexanediol diacrylate, tri(propyleneglycol) diacrylate or a mixture thereof and the colorant is present at a concentration of about 10 to about 30 wt%.

17. A colorant concentrate according to claim 16 futher comprising one or more ultraviolet light absorbing compounds at a concentration of from about 0.1 to about 30 wt %.

18. A colorant concentrate according to claim 16 further comprising one or more antioxidants at a concentration of about 0.01 to about 5 wt %.